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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/625,396   | 07/23/2003  | Kevin Gerard Fraser  | STAR-2              | 9095             |
| 76656                      7590                      12/30/2009<br>Patent Docket Department<br>Armstrong Teasdale LLP<br>One Metropolitan Square<br>Suite 2600<br>St. Louis, MO 63102-2740 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| YL, STELLA KIM   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 1791   |             |                      |                     |                  |
| NOTIFICATION DATE  |             | DELIVERY MODE        |                     |                  |
| 12/30/2009   |             | ELECTRONIC           |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USpatents@armstrongteasdale.com

### Office Action Summary

**Application No.**

10/625,396

**Applicant(s)**

FRASER, KEVIN GERARD

**Examiner**

Stella Yi

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 12, 14-16, 18-22, 24 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 14-16, 18-22, 24, 27-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Petition for revival of application has been granted on December 4, 2009.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 12, 14-16, 18-22, 24, and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over PEKAR (5,638,565) and in further view of EVANS (4,864,671).

Regarding claim 1, PEKAR discloses a method of fabricating a cellular cushion that comprises (1) forming a cushion first layer that is formed integrally with a plurality of hollow cells that extend outward from the first layer, such that each of the plurality of cells extends only from a root defined at the first layer to a tip, and such that the plurality of cells extending from the first layer are coupled together in flow communication (Col.3, lines 11-34; 11-Figure 1); (2) coupling a second layer (13-Figure 1) to the first layer; and (3) coupling an injection stem (note inflation means 24 illustrated in Figures 1 and 2) in flow communication to the plurality of hollow cells to enable an operating pressure within the plurality of hollow cells extending from the same layer to be changed (Col.6, lines 56-65). PEKAR appears to be silent concerning the manner in which the hollow

cells are formed. However, EVANS discloses a method of forming a cushion, the aspect of forming such cells by using an injection molding process (Col.4, line 31). It would have been obvious to one of ordinary skill in the art to use an injection molding process, as taught by EVANS, in the method of PEKAR for the predictable results of facilitating the formation of cells. *See MPEP 2143*

PEKAR teaches the formation of a plurality of hollow cells, as in claims 2 and 22, which can expand, as in claim 3, the incorporation of fluid control devices, as in claim 4, the inclusion of a third or outer layer, as in claims 5-7 and 29-31 (Figures 11-12). The cushion of PEKAR is capable of increasing pressure while in operation, in the manner of claims 32-33 (Col.6, lines 43-55). PEKAR also teaches the use of an inflation stem (24 in Figures 1 and 2), as in claims 8, 15, 16, and 21 and the coupling of a sealing layer and release agent (Col.5, lines 47-63) as in claims 12, 14, 18-20, 24, 27 and 28. As in claim 12, PEKAR teach the cells (12) of the cushion (10) may be interconnected to provide separate zones of inflation (95, 96, and 97) as seen in Figure 15 wherein the coupled cells are adapted to be expanded outwardly towards each other as an operating pressure within the plurality of cells is increased (Col.7, lines 24-30 and Figure 15). PEKAR discloses coupling the said layers using an RF welding process as in claims 9 and 20 (Col.6, lines 50-53).

### ***Response to Arguments***

4. Applicant's arguments filed September 2, 2009 have been fully considered but they are not persuasive.

Applicant argues on pages 8-15 of the Remarks:

a) Pekar does not describe nor suggest a cushion having a plurality of cells that extend outward from only one of the base layers, and from a root defined at that layer to a tip.

b) Pekar does not describe nor suggest that the conduits are aligned substantially in the same plane.

c) At Col.4, lines 62-67, Pekar does not describe nor suggest that slits (22) are fluid control devices that are positioned between adjacent pairs of cells coupled to the same base layer.

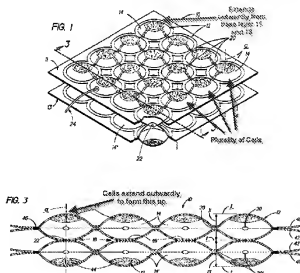
d) Pekar nor Evans, considered alone or in combination, describes or suggests forming, via an injection molding process.

e) Pekar only describes the vertical expansion of the chambers (14) (14') and corresponding cells (12) and does not contemplate or otherwise suggest outward expansion of the cells.

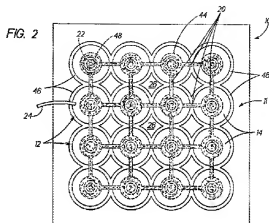
Examiner respectfully disagrees with the Applicant's above arguments and would like to point out the reason(s) as discussed in the rejection:

a)-b) PEKAR discloses a method of fabricating a cellular cushion that comprises (1) forming a cushion first layer that is formed integrally with a plurality of hollow cells that extend outward from the first layer, such that each of the plurality of cells extends only from a root defined at the first layer to a tip, and such that the plurality of cells extending from the first layer are coupled together in flow communication (Col.3, lines 11-34; 11-Figure 1). "Figures 1-3 of Pekar show that when the cushion is inflated, the

upper and lower surfaces of chambers 14 define the extent of the upper layer 11 as the portion thereof that lay between parallel tangents t, while the chambers 14' similarly define the lower layer 13 of the multi-laminar cushion. Also, conduits are disposed between unsealed portions of sheets 40 and 42 and as such, are incorporated directly into the layer 11 to provide intralayer fluid communication between the contiguous portions of the upper chamber portions 14" (Col.3, lines 25-34). See below:



The conduits are aligned substantially in the same plane as seen in Figures 1-3. Figure 2 specifically illustrates the said conduits (20) (channels) aligned substantially in the same plane. See below:



c) Instant claims 4, 8, 12, 14, 15, 16, 18, 24, 26, and 32-33, recite a plurality of control devices positioned between adjacent hollow cells for selectively controlling flow communication independently to each of the plurality of hollow cells. Pekar does describe fluid control devices, conduits 20 that are positioned between adjacent pairs of cells coupled to the same base layer as seen in Figures 1-3 and 11-13. The slits or orifices (22) are used to only aid in the *interlayer* fluid communication not as fluid communication between adjacent cells. Examiner did not interpret the slits as the fluid control device. Examiner had interpreted the conduits to be in control of the fluid flow through the said adjacent cells as recited in the said instant claims above.

d) The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). See also In re Sneed, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983) ("[I]t is not necessary that the inventions of the references be physically

combinable to render obvious the invention under review.”); and *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973) (“Combining the teachings of references does not involve an ability to combine their specific structures.”)

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, PEKAR appears to be silent concerning the manner in which the hollow cells are formed. However, EVANS discloses a method of forming a cushion, the aspect of forming such cells by using an injection molding process (Col.4, line 31). It would have been obvious to one of ordinary skill in the art to use an injection molding process, as taught by EVANS, in the method of PEKAR for the predictable results of facilitating the formation of cells. See MPEP 2143

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that

any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

e) Pekar's cells are of hourglass configuration defined by vertically *stacked* inflated upper and lower chamber portions and medial neck portion, *not* vertically expanded. Besides, instant claims do not limit the form of the cell expansion. The instant claims only claim "expanded outwardly..." or outward expansion of cells which is interpreted to be any general form of expansion whether it is vertical, horizontal, or spherical.

### ***Conclusion***

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stella Yi whose telephone number is 571-270-5123. The examiner can normally be reached on Monday - Thursday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Jeff Wollschlager/  
Primary Examiner, Art Unit 1791